

GAIN FLATTENED BI-DIRECTIONALLY PUMPED RAMAN
AMPLIFIER FOR WDM TRANSMISSION SYSTEMS

Abstract of the Disclosure

5 Raman amplification of a WDM signal with excellent gain flatness across a very large bandwidth is achieved. Co-propagating and counter-propagating Raman pumping are combined in the same fiber. Multiple pumping wavelengths are employed.

Wavelengths employed for co-propagating pumping and wavelengths employed for counter-propagating pumping alternate in order of wavelength. In one embodiment, N

10 co-propagating pump wavelengths and $N+1$ counter-propagating pump wavelengths are used. Alternatively, one may use $N+1$ co-propagating pump wavelengths and N counter-propagating pump wavelengths.